

# MATERIAL SAFETY DATA SHEET

## SILANE 400 DLC®

Date Revised: February 8, 2006

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### SECTION I - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: SILANE 400 DLC  
CHEMICAL NAME: Organoalkoxy silane on calcium silicate

Company:



NATROCHEM, INC.  
P.O. Box 1205  
Savannah, GA 31402-1205

HMIS RATING	
HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

Telephone Numbers:

Transportation Emergencies:

CHEMTREC (U.S.A.): (800) 424-9300 (24 hours)

CHEMTREC (International): (202) 483-7616 (24 hours, call collect)

Product Information: (912) 236-4464 (EST, 8:00AM - 4:00PM M-F)

### SECTION II - COMPONENTS

COMPONENT NAME	CAS#
Organoalkoxysilane	trade secret
Synthetic Calcium Silicate	1344-95-2

### SECTION III - PHYSICAL DATA

Boiling Point: not determined      Specific Gravity: 1.1179 (Calculated)  
Vapor Pressure (mm Hg) : not determined      Percent Volatiles: N/DA  
Vapor Density (Air = 1) : >1      Evaporation Rate: <1  
Solubility in Water: Reacts slowly. Alcohol may be formed by reaction with moisture.  
Appearance and Odor: Off-white, free flowing powder with ester odor.

### SECTION IV - FIRE & EXPLOSION DATA

FLASH POINT (Method Used): 212° F

FLAMMABLE LIMITS: N/A

AUTOIGNITION TEMPERATURE: N/A

EXTINGUISHING MEDIA: Apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus when approaching fire from down wind, or when fighting fire in an enclosed area; oxides of silicon may be involved.

UNUSUAL FIRE & EXPLOSION HAZARDS: None. While moisture reacts to produce ethanol, a copious spray of water will prevent reaction and exotherm.

MARKETED BY  
**HARWICK STANDARD**  
**DISTRIBUTION CORPORATION**  
60 S. Seiberling Street • Akron, Ohio 44305

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SECTION V - HEALTH HAZARD DATA

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HEALTH EFFECTS: 5 mg/m<sup>3</sup> respirable nuisance dust, OSHA. 10 mg/m<sup>3</sup> total nuisance dust, ACGIH. Prolonged or repeated exposure to excessive concentrations of this product dust or any nuisance dust can cause chronic pulmonary disease. Avoid all skin contact.

EXPOSURE LIMITS- Ethanol, TWA OSHA ACGIH 1000 ppm.

PRIMARY ROUTE OF ENTRY- Inhalation, dust contact with the eyes, absorption, skin contact, ingestion.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None

NTP: No

IARC: No

OSHA: No

EFFECTS OF EXPOSURE-

EYES- May cause slight irritation, stinging, excessive blinking, tear production, excess redness of the conjunctivae, swelling of the conjunctivae. Injury to the cornea is not expected.

SKIN- Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material. May cause moderate irritation, itching, local redness and possible swelling.

INHALATION- Nuisance dust. Excessive contact with powder can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds. Short-term harmful health effects are not expected from vapor generated at ambient temperature.

INGESTION- May cause dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination and coma. Repeated overexposure to ethanol may result in the development of progressive liver injury with fibrosis. Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects which together constitute the fetal alcohol syndrome. These include mental and physical retardation, disturbances of learning, motor and language deficiencies, behavioral disorders, and small size head.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- Persons with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection. Pre-existing upper respiratory and lung disease such as, but not limited to bronchitis, emphysema and asthma. May aggravate asthma and inflammatory or fibrotic pulmonary disease.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD

EVALUATION: Acute peroral and percutaneous toxicity studies have shown paresis and paralysis of the limbs of rats and rabbits at high dosages. This material was not mutagenic in an in-vitro mammalian cytogenic test. Based on a 28-day dietary study, the no-observed-adverse-effect (NOAEL) level of this material in rats was determined to be at least 10000ppm. Repeated dermal application of this material to rats for 6 hours per day for 9 days resulted in localized dermal irritation for all doses. The NOAEL for systematic toxicity was 600 mg/kg/day. Inhalation studies in laboratory animals have shown that repeated exposures to high concentrations of a respirable, aqueous aerosol of the hydrolysis and condensation products of this material may cause a chronic inflammatory reaction in the larynx.

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SECTION VI - EMERGENCY & FIRST AID PROCEDURES

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EYE CONTACT: Immediately rinse with clean water for 15 minutes. Retract eyelids often. Seek medical attention.

SKIN CONTACT: Immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. Seek medical attention if ill effect or irritation develops.

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**SECTION VI - EMERGENCY & FIRST AID PROCEDURES**

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INHALATION: Remove to fresh air.

INGESTION: If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention.

SKIN: Remove contaminated clothing. Wash skin with soap and water. If irritation persists or if contact has been prolonged obtain medical attention.

NOTES TO PHYSICIAN: This product contains ethanol. Severe poisoning occurs when the blood ethanol level is 0.3%-0.5%. Above 0.5% the individual will be comatose and death can occur. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs or the excessive administration of fluids. In the presence of hypoglycemia, administer 5%-10% glucose intravenously, plus thiamine 100mg intramuscularly. Hemodialysis is indicated if the ethanol concentration in the blood is 5mb/ml. Naloxone may be useful to reverse clinical alcoholic coma and 0.4-1.21 mg intravenously may arouse ethanol-intoxicated patients.

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**SECTION VII - REACTIVITY DATA**

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STABILITY: Stable.

MATERIALS TO AVOID- Ultraviolet light, heat, excessive temperatures, alkalis, metal salts, strong oxidizing agents. Free radical initiaotors such as peroxides. May cause exothermic polymerization or degradation of the product. Reacts with moisture to form ethanol.

CONDITIONS TO AVOID- See Section X - Other Precautions.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, and silicon. Carbon monoxide.

HAZARDOUS POLYMERIZATION: May occur.

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**SECTION VIII - SPILL OR LEAK PROCEDURES**

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear suitable protective equipment. Prevent runoff. Cover with absorbent or contain. Collect for disposal.

WASTE DISPOSAL METHOD: Incinerate in a furnace where permitted under local, state, and federal regulations.

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**SECTION IX - SPECIAL PROTECTION INFORMATION**

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RESPIRATORY PROTECTION: Use a respirator such as 3M 9900 or equivalent for protection against pneumoconiosis producing dusts.

VENTILATION: General mechanical room ventilation is expected to be satisfactory.

PROTECTIVE GLOVES: Impervious gloves to protect against contact with product.

EYE PROTECTION: Safety goggles.

OTHER PROTECTIVE EQUIPMENT: Protective clothing, eye wash station, safety shower.

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## SECTION X - SPECIAL PRECAUTIONS

**HANDLING AND STORAGE:** Handling can create explosive dust clouds. Eliminate ignition sources, use explosive proof equipment. Conveying and processing equipment should be spark-proof, well bonded and grounded. Avoid dust accumulations.

**OTHER PRECAUTIONS:** Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Launder contaminated clothing before reuse.

## COMPOUNDING IN EPDM COMPOSITIONS

There have been reports of explosions occurring during the Banbury mixing cycle when certain organosilanes are compounded with EPDM. Refer to OSI Specialties Product Safety Bulletin, #OS-183, titled "Control of Compounding silane in EPDM Compositions for Wire and Cable".

## DISPOSAL

Laboratory studies indicate that in highly dilute solution (ca. 10 ppm); this product may be biodegraded in a biological wastewater treatment system.

## SECTION XI - REGULATORY INFORMATION

## TOXIC SUBSTANCE CONTROL ACT (TSCA):

The components of this product are contained on the Inventory of the Toxic Substance Control Act.

## CHEMICAL INVENTORIES:

## OSHA:

The component(s) listed below is identified as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

INGREDIENT	AMOUNT	ACGIH (TLV)	OSHA (PEL)	UNITS
Calcium Silicate	28%	10	5	mg/m3

## SARA 313 TOXIC CHEMICALS:

This product does not contain any toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and the Pollution Prevention Act of 1990.

## SECTION 311/312 - HAZARD CATEGORIES:

The physical and health hazard categories for the hazardous components exceeding the de minimis amount subject to reporting under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372

Name of Chemical	Hazard	Percent in Product
Calcium Silicate	Acute	28%

## OTHER REGULATORY INFORMATION:

EPA Hazard Categories: Immediate Health Hazard  
Delayed Health Hazard  
Fire Hazard

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SECTION XI - REGULATORY INFORMATION

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TRANSPORTATION INFORMATION: Not DOT regulated

DOT Shipping Name: Not regulated

DOT Identification Number:

California SCAQMD Rule 443.1 VOC substances with vapor pressure of  $\geq 0.5$  mmHg At 104C. This product contains 1100g/liter of VOC's.

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SECTION XII - OTHER INFORMATION

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Revision Note: Original issue.

Prepared by: Craig Moore

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N/A = Not applicable N/D = Not determined N/DA = No Data Available N/E = Not established

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